CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 92-057

SITE CLEANUP REQUIREMENTS

TEXACO REFINING AND MARKETING INC.
TEXACO BULK STORAGE TERMINAL
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

Description of Discharger

1. Texaco Refining and Marketing Inc., Texaco Bulk Storage Terminal, (hereinafter called the Discharger) owns and operates a petroleum and chemical bulk storage facility (hereinafter called the Facility), which is presently used to store gasoline, diesel fuel, bunker fuel, and cutter stock as well as a variety of organic chemicals including dioctylphthalate, acetates, ketones, alcohols, ethanols, and butyrates.

2. The 25 acre Facility is located at 100 Cutting Boulevard in the City of Richmond's inner harbor. Cutting Boulevard is adjacent to the north, Santa Fe Channel adjoins the south, Reidel Environmental Services equipment yard and the Lauritzen Channel abuts to the east and Channel Lumber is directly to the west.

Existing Order

3. Waste Discharge Requirements Order No. 89-174 (NPDES permit No. CA0006190) was issued by this Board on November 11, 1989 to regulate the discharge of wastewater from tank bleed-off water, boiler blowdown, and contaminated stormwater runoff from the truck loading and railcar unloading areas. An additional discharge of stormwater runoff from their tank farm is also regulated by this order. The Discharger claims to have diverted all contaminated water to a wastewater treatment system, which discharges treated water to Richmond Sanitary District's publicly owned treatment works. The Discharger claims that only stormwater runoff is now discharged through the NPDES-regulated outfall after passing through a separator.

4. This Order is not intended to rescind, revise or modify, in any way, the existing order. This Order is intended to regulate the investigation and remediation of soil and ground water contamination at the Facility.

Lithology

5. The Discharger has investigated the shallow geology of the facility. The upper soil layer of the Facility, from the surface to a maximum depth of ten feet, consists of several feet of coarse gravelly, sandy fill material and underneath the fill, to a depth of about 10 feet, lies sandy and silty clay, clayey sands, silty sands, and clayey silts interbedded with sand.

Hydrology

6. The Discharger has investigated the shallow hydrology of the facility. Ground water has been encountered within four feet beneath the ground surface. The ground water flow direction appears to be toward the

southeast at an approximate gradient of 0.01 foot/foot. Ground water levels appear to be influenced by the water level in the adjacent harbor.

Previous Investigations

7. Fourteen groundwater monitoring wells and one groundwater extraction well were installed after a spill of more than 6,000 gallons of gasoline occurred on December 8, 1987. The wells are about 8 feet in depth and monitor the shallow groundwater, which was encountered at depths from 20 inches to 4 feet beneath the ground surface. A report summarized the laboratory analysis of samples taken from ground water monitoring wells from February 24, 1989 to September 4, 1991. This information was reported in the Discharger's October 7, 1991 "Quarterly Ground Water Monitoring Report" prepared by Kaprealian Engineering, Inc.

8. Twenty-nine borings were constructed to a maximum depth of 10 feet in September 1991. Soil samples were obtained from 14 borings and ground water samples were obtained from 24 borings. The results are summarized in the Discharger's January 6, 1992 "Preliminary Site Characterization Report" prepared by Seacor.

Groundwater Contamination

9. Groundwater monitoring has been reported from existing ground water monitoring wells and 24 of the 29 borings. Some of the contamination parameters are as follows:

    a. Free phase liquid petroleum hydrocarbons have been detected in 4 wells in thicknesses as great as 0.03 feet in well OW-3. Two borings, B-3 and B-5, were reported to contain free phase liquid petroleum hydrocarbons.

    b. Benzene was reported in 5 wells and in concentrations as high as 360 ug/L in Well OW-12. Benzene was reported above detection levels in 13 of 24 samples and in concentrations as high as 490 ug/L in Boring B-24.

    c. Total petroleum hydrocarbons as gasoline was reported in 10 wells and in concentrations as high as 190 mg/L in well OW-4. Total petroleum hydrocarbons as gasoline was reported in 19 borings and in concentrations as high as 4.2 mg/L in Boring B-13.

    d. Total petroleum hydrocarbons as diesel was reported in 10 wells and in concentrations as high as 190 mg/L in well OW-4. Total petroleum hydrocarbons as diesel was reported in 21 borings and in concentrations as high as 310 mg/L in Boring B-3 or 100 mg/L in Boring B-13.

Soil Contamination

10. Fifteen soil samples were taken from 14 of the shallow borings and some of the results are as follows:

    a. Benzene was reported in 4 samples and in concentrations as high as 510 mg/kg in Boring B-34.

    b. Total petroleum hydrocarbons as gasoline was reported in 6 samples and in concentrations as high as 310 mg/kg in Boring B-10.

    c. Total petroleum hydrocarbons as diesel was reported in 7 borings and in concentrations as high as 5,000 mg/kg in Boring B-10.

Additional Investigation Proposed

11. The Discharger has proposed and additional investigation study to determine the vertical and horizontal extent of soil and ground water contamination. The proposal includes additional ground water monitoring wells.

Cost Recovery

12. The Board's staff has notified the Discharger that pursuant to Sections 25270.9 and 25270.11 of Chapter 6.67, Division 20 of California's Health and Safety Code the Discharger shall be liable to the extent of the reasonable costs actually incurred in overseeing or contracting for cleanup or abatement efforts. The Discharger has agreed to reimburse the State according to Sections 25270.9 and 25270.11.

13. The Discharger shall also be liable to reimburse the State for its reasonable costs related to cleanup activities, not otherwise reimbursed, pursuant to Section 13304(c) of the California Water Code.

Basin Plan

14. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986 and amended it on August 19, 1987 and July 18, 1989. This Order implements the water quality objectives for the Basin Plan.

Beneficial Uses

15. The existing and potential beneficial uses of the Santa Fe Channel, Richmond Inner Harbor, and Central San Francisco Bay are:

    a. Water contact recreation;
    b. Non-contact water recreation;
    c. Wildlife Habitat;
    d. Preservation of Rare and Endangered Species;
    e. Estuarine Habitat;
    f. Fish migration and spawning;
    g. Industrial service supply;
    h. Navigation; and,
    i. Commercial and Sport Fishing.

16. The existing and potential beneficial uses of the ground water in the area are:

    a. Municipal Supply;
    b. Industrial Process and Service Supply; and,
    c. Agricultural Supply.

California Environmental Quality Act

17. The adoption of this Order is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) due to categorical exemption entitled "Replacement or Reconstruction (of Existing Facilities)"; Section 15302, Title 14, California Code of Regulations.

Notice and Meeting

18. The Board has notified the Discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

19. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code and Section 25270 of the California Health and Safety Code, that the Discharger shall cleanup and abate the effects described in the above findings as follows:

A. Prohibitions

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

4. The discharge of recovered free phase liquid petroleum hydrocarbons onto land, into ground waters or surface waters (except as allowed in the existing NPDES order) is prohibited.

B. Specifications

1. The storage, handling, treatment or disposal of soil or ground water containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The Discharger shall conduct free phase liquid petroleum hydrocarbons recovery activities, as needed, to remove all pools of free phase liquid petroleum hydrocarbons beneath the Facility.

3. The Discharger shall remediate soil and water contamination, which actually or threatens to degrade water quality or adversely affect the beneficial uses of the waters of the State.

C. Provisions

The Discharger shall comply with the Prohibitions and Specifications above according to the following time schedule:

1. Submission of a technical report, acceptable to the Executive Officer, related to the recovery of free phase liquid petroleum hydrocarbons, including, but not necessarily limited, to the following:

   a. The horizontal and vertical extent, estimated volume, rate and direction of movement of the free phase liquid petroleum hydrocarbons pool or pools beneath the Facility;

b. Evaluation of the free phase liquid petroleum hydrocarbons recovery system including the number, location and removal efficiency of free phase liquid petroleum hydrocarbons recovery well(s); and,

c. A remediation plan including a time schedule for remove all free phase liquid petroleum hydrocarbons beneath the Facility.

REPORT DUE: No later than January 1, 1993.

2. Submission of a technical report, acceptable to the Executive Officer, related to the remediation of contaminated soil and ground water, including, but not necessarily limited, to the following:

a. The horizontal and vertical extent of contaminated soil and ground water, rate and direction of movement of the contaminated ground water beneath the Facility; and,

b. A remediation plan including a time schedule for all contaminated soil and ground water beneath the Facility.

REPORT DUE: No later than September 1, 1993.

3. The Discharger is required to reimburse the State for all reasonable costs of the State incurred in overseeing or contracting for cleanup or abatement efforts.

4. The Discharger shall maintain a copy of this order at the project field office so as to be available at all times to project personnel.

5. The Discharger's technical reports under subparagraph 2.b. hereof shall include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The reports shall consider the guidance provided by the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California".

6. Technical reports, submitted by the Discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted to the Board on the schedule specified herein. These reports shall consist of a letter report that includes the following:

a. A summary of work completed since submittal of the previous report and work projected to be completed by the time of the next report;

b. Identification of any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;

c. In the event of non-compliance with any Prohibition, Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order; and,

d. In the first self-monitoring report, an evaluation of the current ground water monitoring system and a proposal for modifications as appropriate.

7. All submittals of hydrogeological plans, specifications, reports, and documents (except quarterly progress and self-monitoring reports), shall be signed by and stamped with the seal of a registered geologist, registered engineering geologist, or registered professional engineer.

8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

9. The Discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the Discharger, shall also be provided to the following agencies:

    a. City of Richmond, Planning Department;
    b. Contra Costa County Health Department; and,
    c. California Environmental Protection Agency, Department of Toxic Control Substances.

11. The Discharger shall permit the Board or its authorized representative, in accordance with Section 13267 (c) of the California Water Code, the following:

    a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order;

    b. Access to copy all records required to be kept under the terms and conditions of this Order;

    c. Inspection of any monitoring equipment or methodology implemented in response to this Order; and,

    d. Sampling of any ground water or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Discharger.

12. The Discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal areas.

13. The Board considers the property owner and site operator to have a continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

14. These requirements do not authorize the commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without the appropriate federal, state or local permits, authorizations, or determinations.

15. If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited, or probably will be discharged in or on any waters of the state, the Discharger shall

a. Report such discharge to the following:

(1) This Regional Board at (510) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m.; and,

(2) The Office of Emergency Services at (800) 852-7550.

b. A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

(1) The nature of waste or pollutant;
(2) The quantity involved and the duration of incident;
(3) The cause of spill;
(4) The estimated size of affected area;
(5) The corrective measures that have been taken or planned, and a schedule of these measures; and,
(6) The persons/agencies notified.

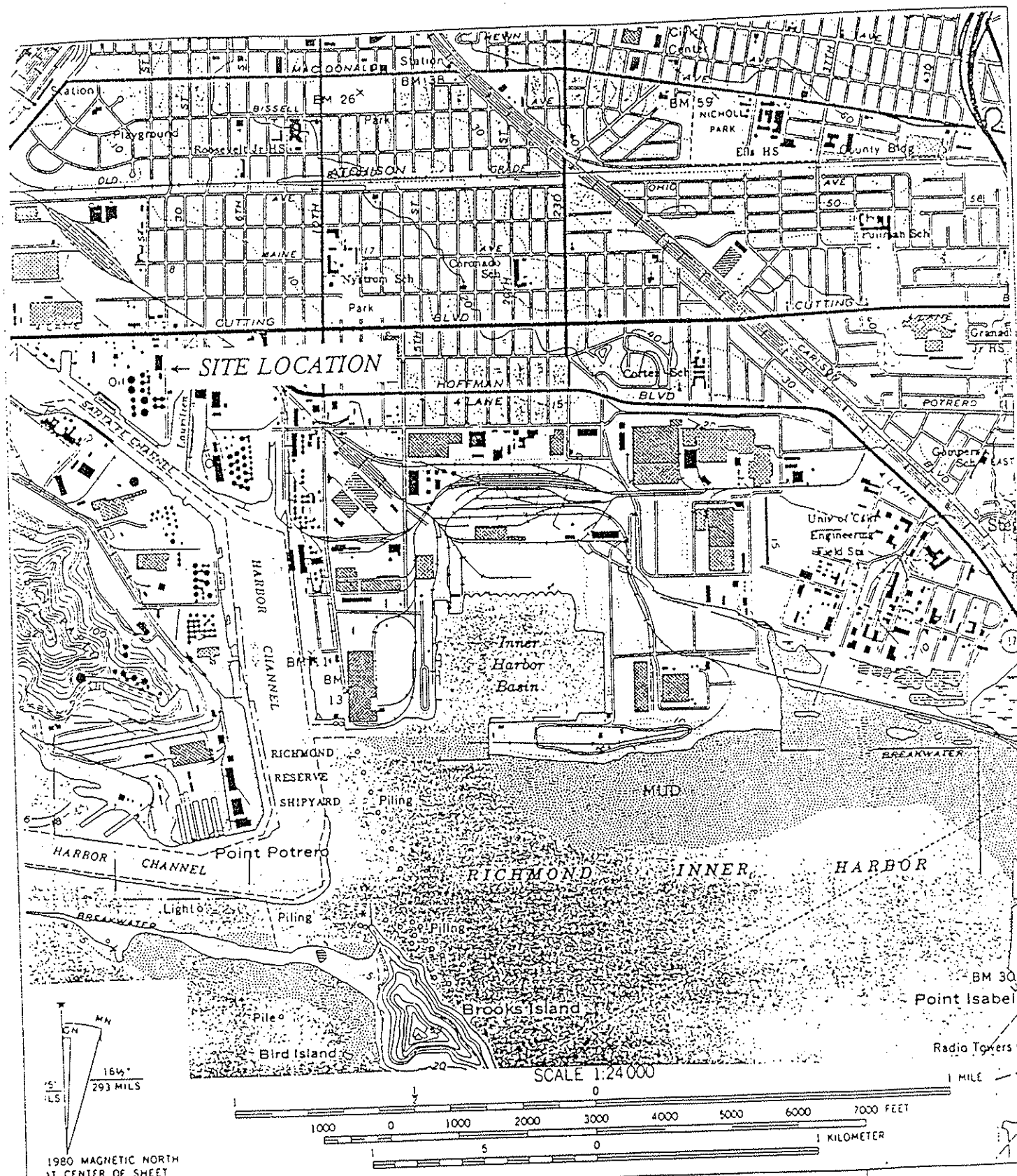
16. The Board will review this Order periodically and may revise the requirements when necessary.

17. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board shall consider revision to this Order.

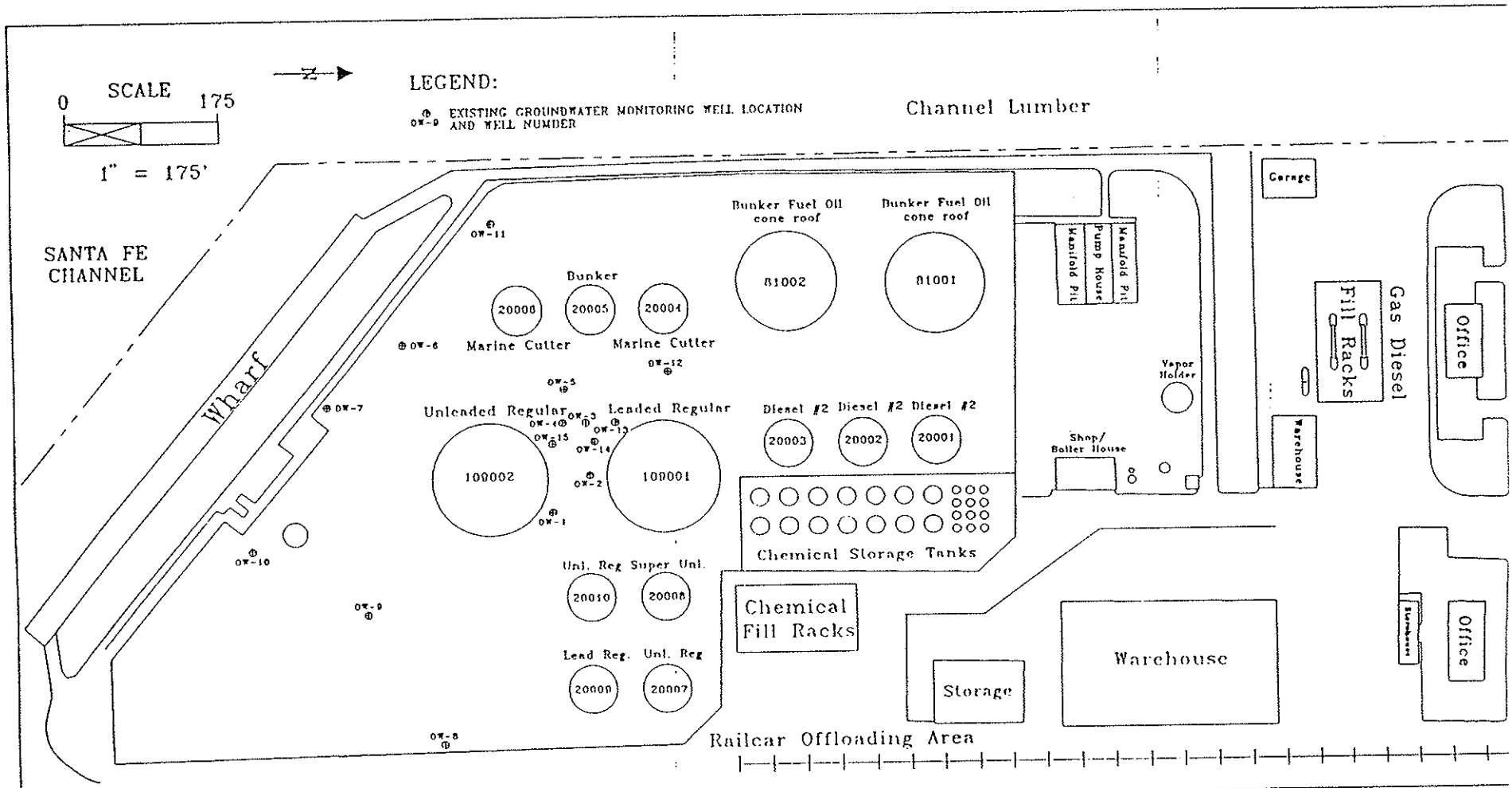
I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on May 20, 1992.

Steven R. Ritchie
Executive Officer

Attachments:
Figure 1: Site Map
Figure 2: Ground Water Monitoring Well Location Map
Figure 3: Boring Location Map
Self Monitoring Program

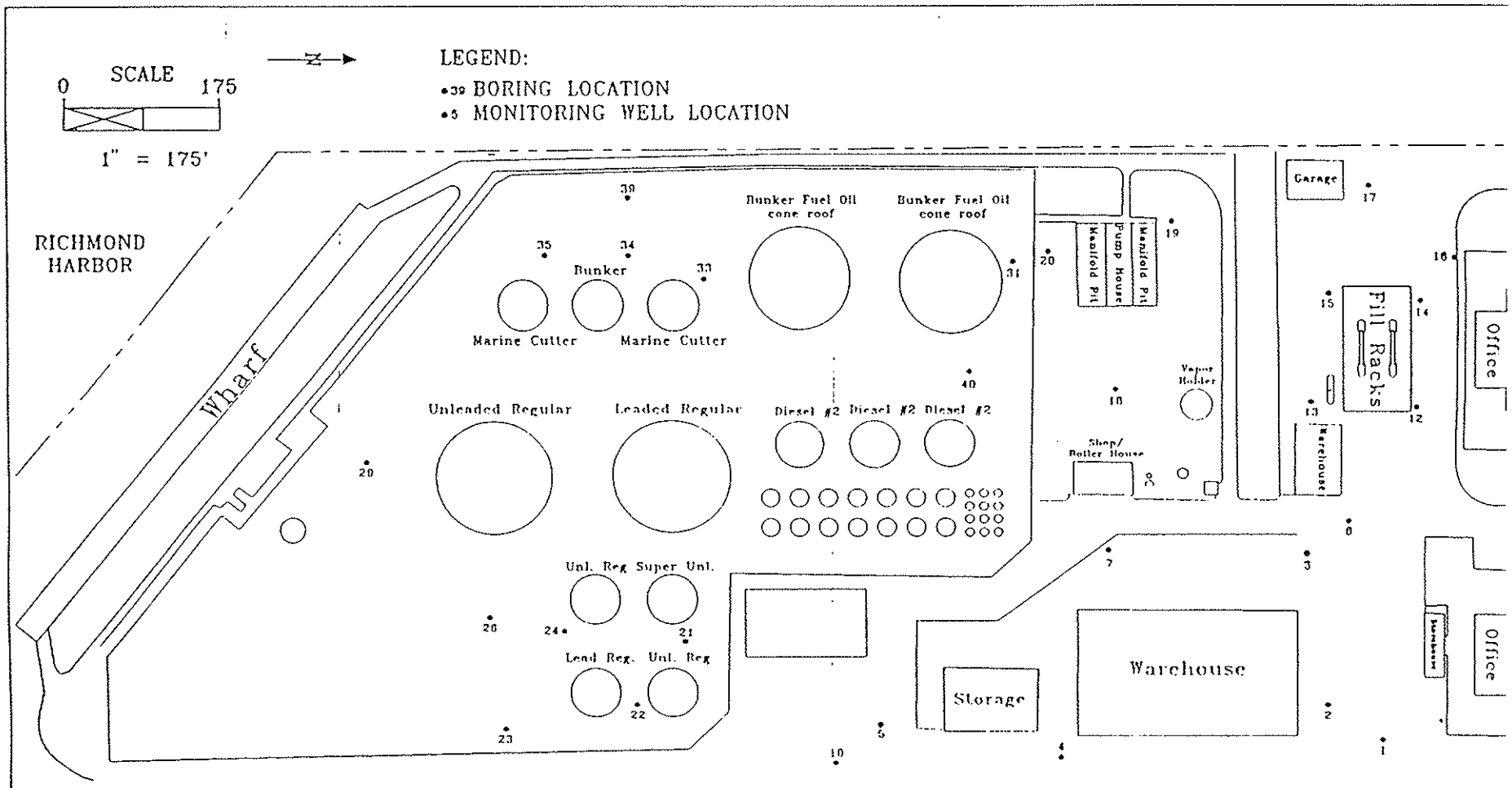


DRAFTED BY	CHECKED BY	PROJECT NO. 70002-002-01-TR05	FIGURE 1	SEACOR
EA	SF			
DWG DATE	REV DATE	TEXACO BULK TERMINAL RICHMOND, CALIFORNIA	SITE LOCATION MAP	CONCORD, CA
12/29/91	12/29/91			
FILE NAME				
SEACOR				



Reidel Environmental Services

DRAFTED BY: EA	CHECKED BY: SF	PROJECT NO. 70002-002-01-TR05	FIGURE 2	SEACOR
DWG DATE: 10/6/91	REV DATE: 10/20/91	TEXACO BULK TERMINAL RICHMOND, CALIFORNIA	SITE PLAN	CONCORD, CA
FILE NAME: XTEX2				



DRAFTED BY: EA	CHECKED BY: SF	PROJECT NO. 70002-002-01	FIGURE 3	SEACOR
DWG DATE: 10/6/91	REV DATE: 2/10/92	TEXACO BULK TERMINAL RICHMOND, CALIFORNIA	BORING LOCATION MAP	CONCORD, C/
FILE NAME: XTEX4				

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

TEXACO REFINING AND MARKETING INC.

TEXACO BULK STORAGE FACILITY

100 CUTTING BOULEVARD

RICHMOND, CONTRA COSTA COUNTY

SITE CLEANUP REQUIREMENTS

ORDER NO. 92-057

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. Reporting responsibilities of waste Dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16.

2. The principal purposes of a self-monitoring program by a waste Discharger are the following:

   a. To document compliance with Site Cleanup Requirements and prohibitions established by the Board;

   b. To facilitate self-policing by the waste Discharger in the prevention and abatement of pollution arising from waste discharge;

   c. To develop or assist in the development of standards of performance, toxicity standards and other standards; and,

   d. To prepare water and wastewater quality inventories.

B. Sampling And Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan.

2. Water and waste analysis (except total suspended solids) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. Definition Of Terms

1. A grab sample is a discrete sample collected at any time.

2. Duly authorized representative is a duly authorized representative may thus be either a named individual or any individual occupying a named position such as the following:

   a. Authorization is made in writing by a principal executive officer; or,

   b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or

an individual or position having overall responsibility for environmental matters for the company.

D. Schedule Of Sampling, Analysis, And Observations

1. The Discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Article 5 of Chapter 15.

2. A statistical analysis shall be performed and reported annually as described in the current revision of Appendix II of Chapter 15.

E. Records To Be Maintained By The Discharger

1. Written reports shall be maintained by the Discharger for ground water monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

   a. Identity of sample and sample station number;
   b. Date and time of sampling;
   c. Method of composite sampling (See Section C-Definition of Terms);
   d. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
   e. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory;
   f. Calculation of results;
   g. Results of analyses, and detection limits for each analyses; and,
   h. Chain of custody forms for each sample.

F. Reports To Be Filed With The Board

1. Ground water monitoring results shall be filed monthly until the schedule allows quarterly samples, then reports shall be quarterly. Written self-monitoring reports shall be filed no later than 45 calendar days following the end of the report period. In addition an annual report shall be filed as indicated. The reports shall be comprised of the following:

   a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the Discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify ground water protection standards, the following shall apply and the compliance sheet shall contain:

i. The method and time of water level measurement, the type of pump used for purging, pump placement in the well, method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water; and,

ii. Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; the chain of custody record.

c. A summary of the status of any remediation work performed during the reporting period. This shall be a brief and concise summary of the work initiated and completed as follows:

i. As interim corrective action measures; and,

ii. To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.

d. The Discharger shall describe, in the quarterly report, the reasons for significant increases in a pollutant concentration at a well onsite. The description shall include the following:

i. The source of the increase;

ii. How the Discharger determined or will investigate the source of the increase; and,

iii. What source removal measures have been completed or will be proposed.

e. A map or aerial photograph showing observation and monitoring station locations, and plume contours for each chemical in each aquifer shall be included as part of the quarterly Self-Monitoring Report.

f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification

shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:

i. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

ii. In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

g. By January 31 of each year the Discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

i. Tabular and graphical summaries of the monitoring data obtained during the previous year;

ii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the Site Cleanup Requirements; and,

iii. A written summary of the ground water analyses indicating any change in the quality of the ground water.

G. In the event the Discharger violates of threatens to violate the conditions of the Site Cleanup Requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:

1. Maintenance work, power failures, or breakdown of waste treatment equipment, or;
2. Accidents caused by human error or negligence, or;
3. Other causes, such as acts of nature.

The Discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste Discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the effluent limits have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

Part B

A. Description Of Observation Stations And Schedule Of Observations

1. The observation stations shall consist of 9 existing ground water monitoring wells (OW-1, 5, 6, 7, 8, 9, 10, 11, and 12) and any additional ground water monitoring wells added during the soil and ground water characterization or the evaluation of remediation work.

2. The schedule of well observations and grab sampling shall be conducted quarterly within the months of January, April, July and October.

B. Observations and Test Procedures

1. The ground water well observations shall consist of the following:

   a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;

   b. Ground water temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Ground water conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Ground water pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,

   e. Ground water turbidity measured at the time of sampling.

   f. Free phase petroleum hydrocarbon product thickness.

2. The test procedures for the ground water samples and soil samples shall be as described herein. The following section shall not apply to ground water samples taken from wells with more than 0.1 inch thickness of free phase petroleum hydrocarbon product:

   a. Volatile aromatic compound analysis using the EPA Method 5030/8020;

   b. Total Petroleum Hydrocarbons and Fuel Hydrocarbons using the EPA Method 5030/8015 (Modified); and,

   c. Total Oil and Grease using Standard Methods 418.1, infrared analysis.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the Discharger.

Steven R. Ritchie for
Executive Officer

May 20, 1992
Date Ordered